

DOCUMENT RESUME

ED 250 348

TM 840 656

AUTHOR Cartledge, Gwendolyn; And Others
TITLE Formal Language Assessment of Handicapped and Nonhandicapped Black Children.
PUB DATE Apr 84
NOTE 37p.; Paper presented at the Annual Meeting of the American Educational Research Association (68th, New Orleans, LA, April 23-27, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Black Dialects; *Black Students; Comparative Analysis; Cross Cultural Studies; Elementary Education; *Language Tests; *Learning Disabilities; Socioeconomic Status; Student Evaluation; *Test Bias; *Test Interpretation; White Students
IDENTIFIERS *Test of Language Development

ABSTRACT

The Test of Language Development--Intermediate (TOLD-I) was administered to 26 learning disabled (LD) and 26 nonLD elementary aged black children. The subjects were matched for age, IQ, and class placement. Statistically significant differences were found between the two groups on four of the five subtests of the TOLD-I. The data also were analyzed according to socioeconomic groupings with findings that the performances of the higher socioeconomic status subjects more closely approximated test norms. Study results are discussed according to (1) relative performance of LD and nonLD black children on the TOLD, (2) relative language performance of black LD and white LD children, and (3) effects of socioeconomic factors on the language test performance of black children. (Author/BS)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

Formal Language Assessment of
Handicapped and Non-handicapped
Black Children

Gwendolyn Cartledge, Diane Stupay, and Caroline Kaczala

Cleveland State University

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.
☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official NIE
position or policy.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

G. Cartledge

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Running Head: LANGUAGE ASSESSMENT

ED250348

TM 840656

Abstract

The TOLD-I was administered to 26 LD and 26 nonLD elementary aged Black children. The subjects were matched for age, IQ, and class placement. Statistically significant differences were found between the two groups on four of the five subtests of the TOLD-I. The data also was analyzed according to socioeconomic groupings with findings that the performances of the higher SES subjects more closely approximated ~~group~~^{test} norms. Study results are discussed according to a) relative performance of LD and NLD Black children on the TOLD, b) relative language performance of Black LD and white LD children, and c) effects of socioeconomic factors on the language test performance of Black children.

Formal Language Assessment of Handicapped and
Nonhandicapped Black Children

Gwendolyn Cartledge, Diane Stupay, Caroline Kaczala
Cleveland State University

Language disorders have been closely associated with learning disabled children (Bryan & Bryan, 1978; Johnson & Myklebust, 1967; Kirk & Kirk, 1971; Wiig & Semel, 1976) and language differences are characteristic of Black children (Dillard, 1972; Vaughn-Cooke, 1980). Although much attention has been given to the language development and deficits of both of these populations separately, few or no investigations have been conducted into the language of Black LD children, per se.

Researchers of the language of LD children have focused largely on specific linguistic structures, with syntax and grammar being the most problematic areas (Donahue, Pearl, & Bryan, 1982; Liles, Shulman, & Barlett, 1977; Moran & Byrne, 1977; Semel & Wiig, 1975; Vogel, 1983). There is clear evidence of quantitative differences in that learning disabled children have been found to perform less well on syntax and grammar measures than their nonhandicapped peers. Qualitative differences are less clear (Vogel, 1983); however, there are indications that LD children tend to respond characteristically,

showing set linguistic patterns and errors differing from nonLD children (Liles, et al., 1977; Moran & Byrne, 1977; Semel & Wiig, 1975). In contrast to the periods of rapid growth common among nonhandicapped children, Andolina (1980), for example, found LD children tended to "exhibit a gradual control of syntax ..." (p. 27).

Differences have been found, as well, in the way learning disabled children process language according to expressive and receptive linguistic systems. Hessler and Kitchen (1980) administered the Test of Language Development Primary (TOLD-P) (Newcome & Hammill, 1977) to 25 white, middle-class learning disabled boys. In comparing the results to the standardized norms, the researchers found that the LD boys' scores fell on the border of the below average range and there were greater problems with language production than language understanding. Noel (1980), in a study of referential language, also found LD children to be less effective in their expressive language than their receptive language.

~~The use of standardized language tests is an issue of major~~ concern for both LD and Black children (Harber, 1980). The Illinois Test of Psycholinguistic Abilities (ITPA) (Kirk, McCarthy, Kirk, 1968), for example, with its application of Osgood's theoretical model and its obvious logical construction designed explicitly for LD populations has been used extensively

to assess special children. However, various reviewers (Hammill & Newcomer, 1976; Ysseldyke & Salvia, 1978) question its utility based on the unrepresentative, highly restrictive norming population and its inadequate reliability and validity data. The ITPA, among other instruments, is further indicted by Vaughn-Cooke (1980) for its inherent biasing effect against Black children.

For at least two decades, the use of standardized instruments to assess the language of Black children has been a point of controversy, centered largely on the deficit versus difference issue (Bartel, Grill, & Bryan, 1973; Vaughn-Cooke, 1980; Weiner, Lewnau & Erway, 1983). Black English (BE) has been defined as a legitimate language system; however, the assessment standard employed in formal language tests is that of standard English (SE), automatically penalizing the BE speaker. Vaughn-Cooke (1980) points out that most instruments do not allow for differential testing, which would require the examiner to record only legitimate deficits, not differences based on the child's cultural language pattern. As a result, many Black children are labeled language deficient when they should be described more accurately as language different. This further results in the disproportionate placement of Black children into remedial and special education programs (Harber, 1980).

The Test of Language Development-Primary (TOLD-P) (Newcomer & Hammill, 1977) and the Test of Language Development - Intermediate (TOLD-I) (Hammill & Newcomer, 1982) are a sequence of standardized language instruments designed to assess the linguistic skills of primary and intermediate aged children, respectively. Both tests are recommended to be used with various populations including Black and handicapped children. To date, research has been conducted and reported only on the TOLD-P. The TOLD-P is reported to be a valid and reliable instrument (Haber, 1980); however, its usefulness with nonhandicapped, predominantly BE speaking Black children has been empirically questioned (Weiner, et al., 1983). Weiner and her colleagues concluded that the TOLD-P unfairly penalized BE speaking children and representative numbers of BE speakers need to be included in the norming population. The importance of such findings are magnified when considering the estimates of approximately 80% of the Black population as BE speakers (Dillard, 1972). Black English occurs, however, in a variety of forms and to varying degrees (Mims, 1982).

It is probably safe to assume that the problems associated with the formal assessment of the language of LD children and Black children are compounded in the formal language assessment of Black LD children. Language disorders are considered to be characteristic of LD children and on valid language measures it

would be expected that Black LD children would perform differently than Black NLD children. It is not clear if standardized language assessments would discriminate Black LD and NLD children and if the language patterns of Black LD children would be consistent with those found among white LD populations.

Therefore, there were two purposes for this research. First, there was an interest in comparing the formal language performance of Black LD and Black NLD children as assessed on the (TOLD-I) to determine degree and type of differences. Related to this was the desire to analyze the language profiles of Black LD children relative to those reported in the literature for white LD children. The second study focus was to compare the performance of Black children according to the norming population, thereby assessing a biasing effect.

Method

Subjects

The subjects were 52 third-, fourth-, and fifth-grade children from a small urban school system. There were 38 boys and 14 girls. Grade placement for the subjects were as follows: 19 third graders, 17 fourth graders and 16 fifth graders. All of the children were Black and came from homes that ranged from lower to middle socioeconomic levels. The children were selected from two elementary schools, one located

in a predominantly lower socioeconomic area in which 85% of the families were on ADC and the other in a higher-income area in which fewer than 25% of the families were on ADC. Data on family income and parent occupation was not available on the individual subjects in this study. Since the two schools obviously represent different income levels, the subjects were labeled as belonging to the higher and lower SES school. Twenty-six of the subjects were identified as learning disabled (L.D.) and the remaining 26 were nonhandicapped (non L.D.) peers. Screenings for learning disabilities had been conducted previously by the school system, adhering to state guidelines of average or above intelligence and a significant discrepancy between expected and actual performance. L.D. and non L.D. children were matched

Insert Table 1 about here.

The mean I.Q. for the L.D. subjects was 88.46 and for nonL.D. subjects was 89.23. Subjects ranged in age from 8 years 8 months to 12 years 8 months. A comparison of L.D. and nonL.D. subjects on I.Q. and chronological age is presented in Table 2.

Insert Table 2 about here.

Procedures

Each subject in this study was individually assessed on the TOLD-I. The TOLD-I is an individually administered, norm-referenced test of spoken language, appropriate for children "aged 8-6 to 12-11, who speak 'typical' English" (Hammill & Newcomer, 1982, p. 7). The test consists of five subtests labeled Sentence Combining,, Characteristics, Word Ordering, Generals, and Grammatic Comprehension which measure various aspects of linguistics.

Sentence Combining (SC) is a measure of syntax and expressive language. In this subtest, subjects are asked to combine 2 or more short sentences into one sentence. Characteristics (CH) is a measure of semantics and receptive language. In this subtest, subjects were asked to identify as true or false statements of general information such as "All birds are blue." Word Ordering (WO) is a measure of syntax and expressive language. In this subtest, subjects are asked to order a series of words into a meaningful sentence. Generals (GN) is a measure of syntax and expressive language. In this subtest, subjects identify the classification for a series of words. i.e., red, brown, and green are colors. Grammatic Comprehension (GC) is a measure of syntax and receptive language. In this subtest, subjects identify whether a sentence is grammatically correct.

Results

Mean scores for each of the five subtests of the Told-I as well as combined subtest scores which yielded measures of syntax, semantics, expressive language, and receptive language, constituted major dependent variables for this study. A 2 X 2 (SES by group) analysis of variance technique was performed on each of the dependent variables.

The two way analysis of variance for the sum of the five subtests of the Told-I, Sentence Combining, Characteristics, Word Order, Generals, and Grammatic Comprehension, resulted in a significant main effect for groups with the LD subjects having lower scores than NLD subjects ($F(1, 48) = 20.71, p < .0001$). Means relevant to the analyses of variance are presented in Table 3. There were significant differences

Insert Table 3 About Here

between NLD and LD subjects on four of the subtests; Sentence Combining, ($F(1, 48) = 19.05, p < .0001$); Characteristics, ($F(1, 48) = 7.48, p < .01$); Word Ordering, ($F(1, 48) = 9.96, p < .01$); Generals, ($F(1, 48) = 9.47, p < .01$). In each case, LD subjects scored lower than NLD subjects. Differences between groups on the subtest Grammatic Comprehension, a measure of

syntax, were not significant, ($F(1, 48) = 2.12, p < .15$). In this subtest, subjects identify as correct or incorrect forty sentences, many of which contain nonstandard grammatical forms. The subtest which showed the greatest disparity between NLD and LD subjects was sentence combining, a syntactic measure.

The analyses of variance for the main effects for SES, higher SES and lower, were not significant on the five subtests of the Told-I, although there was a trend toward significance on the Grammatical Comprehension subtest ($F(1, 48) = 2.91, p < .10$), with the higher SES subjects having higher scores than lower SES subjects. Mean scores for SES groups are in Table 3.

The analysis of variance did not result in significant SES group interactions. However, it should be noted that there was greater disparity in the higher SES school than in the lower SES school between NLD and LD subjects on three subtests: Word Order, Generals, and Grammatical Comprehension (see Figure 1). In order to further analyze SES by group effects, Tukey's pair-wise comparisons were conducted.

Insert Figure 1 About Here

A significant finding was obtained only on the subtests for Generals, ($Q = 4.28, p < .05$) with the higher SES NLD subjects scoring significantly higher than the higher SES LD subjects.

To compare the results of this sample of Black children to national norms, one sample t tests were computed. Comparability to the norm was tested separately for each subgroup, NLD higher and lower SES, and LD higher and lower SES. Subtest mean scores as well as composite subtotals which constituted measures of syntax, semantics, expressive language and receptive language were used as dependent variables. Table 4 presents t values for sample subject means on each of the Told-I subtests compared to the norm means. Both higher and lower SES LD subjects' mean scores were significantly lower than mean scores for the norming population on all five subtests. The NLD higher SES subjects mean scores were comparable to the norm on three subtests: Word Order, Generals, and Grammatic Comprehension. The NLD lower SES subjects mean scores were comparable to the norm on only one subtest, Sentence Combining.

Insert Table 4 About Here

Tables 5 & 6 compare sample and norm means for measures of syntax, semantics, expressive language and receptive language. Subtest means which were combined to constitute a measure of syntax were: Word Order, Sentence Combining, and Grammatic Comprehension. Subtest means which were combined to constitute a measure of semantics were: Characteristics, and Generals.

Subtest means which constituted a measure of expressive language were: Generals, Sentence Combining, and Word Ordering. Subtest means which constituted a measure of receptive language were: Characteristics and Grammatical Comprehension.

Insert Table 5 & 6 About Here

The data from Table 5 indicate that both LD and NLD groups scored significantly below the norming population on all composite measures. All of the composite means for the LD subjects were lower than those of the norming population at the .0001 level of significance, with expressive language and syntax being the areas of greatest discrepancy as evidenced by the higher t values. For the NLD group, the composite area showing the greatest distance from the test norm was receptive language.

Analyzing this data according to SES subgroups, it can be seen in Table 6 that the NLD higher SES subjects obtained the highest mean composite scores of the four subgroups, and that the expressive language scores for this subgroup were comparable to the test norms. In relationship to the norm, the LD higher SES obtained better scores on receptive measures than expressive measures. In contrast, the ^{LD} lower SES subjects exhibited comparable performance on both expressive and receptive composites in comparison to the norm.

To determine the extent to which the Told-I represents a measure of language development for this sample of Black children, Pearson product moment correlations were computed to assess the relationship between age and subtest scores. Specifically, age was correlated with raw scores for each of the five subtest separately for the NLD and LD sample. Table 7 compares the correlation coefficients for sample subjects to correlations obtained for the norming population. While the coefficients were statistically significant for the norming population,

Insert Table 7 About Here

they represent weak relationships. In this study sample, correlations between age and raw scores were significant for the NLD subjects only on measures of Sentence Combining and Generals, and for the LD subjects only on the measure of Word Order. The strength of the relationships were low or moderate on three of the subtests, ~~Sentence Combining, Generals and~~ Grammatical Comprehension for both LD and NLD samples. On the measure of Characteristics, the correlation for the NLD subjects was low positive, and there was no relationship between age and raw scores for the LD sample. On the measure of Word Order, the correlation for the NLD subjects was low negative and the correlation for the LD subjects was moderate and positive

To further compare language development across ages, scores for LD and NLD groups were combined and means were computed for three age groups, 9-6 to 9-11, 10-0 to 11-5, and 11-6 to 12-11, on each of the five subtests. These means were compared to the norming group as presented in Figure 2. While the scores for the study sample were depressed when compared to the norming population, except for the Characteristics subtest, they follow the same pattern of development.

Insert Figure 2 About Here

DISCUSSION

The results of this study indicate that the first four subtests of the TOLD-I do discriminate the language test performance of LD and NLD Black children. The mean scores of the NLD subjects fell within the test's low average range while the mean scores for the LD subjects fell either on the border or within the below average range. This significantly lower performance suggests the presence of possible language disorders, rather than simply language differences, among the LD subjects. Upon closer scrutiny of test performance, two distinct language patterns are observed. First, syntax emerges as the most salient linguistic feature. The subtest of greatest disparity between the two groups was Sentence Combining,

considered to be a measure of syntactic maturity (Hunt, 1965). Additionally, composite measures showed greater syntactic than semantic differences. These findings support other research in this area showing syntax to be the linguistic feature of greatest difficulty for LD children (Simms & Crump, 1983).

The second pattern considered to be characteristic of LD children related to linguistic systems. Mean composite scores for receptive language were closer to the norm than those for expressive language, indicating relatively better performance in language understanding than production. This profile is similar to those reported on LD white children (Hessler & Kitchen, 1960; Noel, 1980).

From these findings, it appears that the quantitative and qualitative performances of LD Black children parallel those typically given for LD white children. The picture changes, however, when the data is analyzed according to socioeconomic status (SES). Black English, considered to be a function of socioeconomic level was found to be a factor in the language performance of these subjects and thus altered the profile found initially when the data was viewed only according to groups (NLD v LD). Although the subjects in this study were not assessed directly for Black English, other investigations conducted in the same school system revealed that at least 50% of the elementary and high school population used extensively various

forms of nonstandard grammar, indicative of Black English (Deroia, 1983; Mims & Camden, 1984). Informal observations and performance on the fifth subtest indicated that Black English was used more extensively among the lower SES subjects.

The failure of the fifth subtest to discriminate LD and NLD groups is not surprising since this subtest contained many grammatical forms characteristic of Black English. At least 15 of the 40 items on this subtest definitely contain Black English markers and many of the nonstandard forms of the remaining items are commonly found among the speech patterns of Black English speakers. The subjects were required to tell whether sentences read to them used the correct grammatical form, e.g., "John always forget where he lives." These data indicate that while both LD and NLD Black children fell within the lower limits of the average range for this subtest, the group least affected by these Black English markers was the NLD middle SES group. One would expect the language patterns of higher SES Blacks to more closely approximate those of standard English. The differences between the higher and lower SES children approached significance on this subtest, prompting the speculation that statistically significant differences probably would be achieved with increased sample size.

Comparison of the mean scores of the subjects in this study to the norming population also highlights the higher SES advantage. Although all of the mean scores for the NLD subjects fell within the average range for this test, only the NLD higher SES mean subtest (Word Order, Generals, and Grammatic Comprehension) and composite (Expressive Language) scores were comparable to the test norms. This is in contrast to the NLD lower SES subgroup who differed significantly from the norms on four of the five subtests and on all composite scores. As might be expected, the mean subtest and composite scores of the LD subjects, higher and lower SES, fell significantly below the test norms. Two of the five subtests, Sentence Combining and Word Order, fell within the below average range. These findings plus the greater disparity observed between the higher SES NLD and LD subjects suggest that the language differences of the Black English speaking subjects were interfering with test performance.

As noted previously, LD subjects were found to show a relatively better performance on receptive measures over expressive measures. When the data are analyzed according to SES; however, the pattern holds only for the middle SES LD. The t values for the mean composite scores of the lower SES LD children indicate comparable performances in both receptive and expressive language. This occurrence is felt to be misleading,

since on closer examination it can be seen that this is most likely influenced by language differences rather than simply language deficits. Receptive language is determined by the combination of the Characteristics and Grammatical Comprehension subtests. The Grammatical Comprehension subtest, requiring the subjects to discriminate nonstandard English forms was the area of highest performance for the higher SES LD subjects, thereby contributing to the higher receptive language rating. Since the LD children (higher and lower SES) have similar profiles otherwise, it is felt that the BE markers of the fifth subtest proved to be a confounding variable for the LD lower SES subjects. Without this interference, the LD lower SES subgroup probably would show a language processing pattern similar to that of the LD higher SES subgroup and the white LD children reported in the literature.

The fifth subtest, Grammatical Comprehension, appears to be an interfering factor for the NLD group, as well, producing receptive language norm differences that are considerably greater than the other composite areas. This effect is particularly pronounced among the NLD lower SES subjects.

The test developers present the TOLD-I as a test of language development substantiated by (a) highly significant ($p < .001$) positive correlation coefficients between test score and age and (b) progressively better performance by older age groups. The

correlations between age and raw scores for the subjects in this sample were low or nonexistent; however, sample correlations were comparable to those of the norming population, with two exceptions. The failure to obtain greater statistical significance in this study was attributed to the small sample size. The progressively better performances of increasing age groups found with the subjects of this study also correspond to the pattern given for the norming population. Weiner, et al., (1983) in a study of the TOLD-P with BE speakers found moderate correlation coefficients between age and test scores, and used this information as a basis for rejecting the TOLD-P as a test of language development for the Black English speaking subjects in her study. The correlations were higher than those given for the norms for the TOLD-I. The question is whether the psychometrics reported for the TOLD-I are sufficient for the assertion that it is a test of language development, even for the majority population. There are indications, however, of improved performance with age among the norming population and among the subjects of this study.

Based on this study, there is evidence that Black LD and NLD children can be differentiated on the TOLD-I. Additionally, there is reason to believe that the language patterns and deficits of LD Black children are commensurate with those typically given for LD white children. The picture is obscured,

however, by the presence of Black English, in this study considered to vary proportionately with socioeconomic status. The test discriminated best the higher socioeconomic LD and NLD Black subjects and the language patterns found within the higher SES group were more consistent with those reported for middle class white populations.

Subtest scores indicated that the language differences of these Black children, particularly the lower SES subjects, interfered with test performance. The test developers suggest employing local norms under such circumstances to mitigate against test bias. However, most school systems, even predominantly Black ones, tend to apply national norms, and many Black children are in systems where they are the minority and the local norms still would not reflect their language differences. With these considerations, it seems that the TOLD-I needs to be sensitized to divergent language patterns such as Black English. Examples of such changes might include: (1) eliminating nonstandard items that are specifically indicative of Black English, (2) altering the scoring procedures to account for the differences of Black English speakers, and (3) increasing the numbers of Black English speakers, not just Black children, in the norming population. In its present state, the TOLD-I appears to be least appropriate for lower socioeconomic Black children.

- Andolina, D. (1980). Syntactic maturity and vocabulary richness of learning disabled children at four age levels. Journal of Learning Disabilities, 13 (7), 27-32.
- Bartell, N., Grill, J., & Bryen, D. (1973). Language characteristics of black children: Implications for assessment. Journal of School Psychology, 11, 351-364.
- Bryan, T.H., & Bryan, J.H. (1978). Understanding learning disabilities. Palo Alto, California: Mayfield Publishing Co.
- Deroia, M.D. (1983). Production and discrimination of Standard and nonstandard phonemic variance. Unpublished master's thesis, Cleveland State University.
- Dillard, J.L. (1972). Black history: Its history and usage in the United States. New York: Random house.
- Donzhue, M., Pearl, R., & Bryan, T. (1982). Learning disabled children's syntactic proficiency on a communicative task. Journal of Speech and Hearing Disorders, 47, 397-403.
- Hammil, D.D., & Newcomer, P.L. (1982). Test of language development - intermediate. Austin, Texas: Pro-Ed.
- Harber, J.R. (1980). Issues in the assessment of language and reading disorders in learning disabled children. Learning Disability Quarterly, 3(4), 20-28.

- Hessler, G.L., & Kitchen, D.W. (1980). Language characteristics of a purposive sample of early elementary learning disabled students. Learning Disability Quarterly, 3(3), 36-41.
- Hunt, K.W. (1965). Grammatical structures written at three grade levels. (Report No. 3). Champaign, Illinois: National Council of Teachers of English Research Reports.
- Johnson, D., & Myklebust, H. (1967). Learning disabilities. New York: Grune & Stratton.
- Kirk, S., & Kirk, W.D. (1971). Psycholinguistic learning disabilities: Diagnosis and remediation. Chicago: University of Illinois Press.
- Kirk, S., McCarthy, J., & Kirk, W. (1968). Illinois test of psycholinguistic abilities. Urbana, Illinois: University of Illinois Press.
- Liles, B.Z., Shulman, M.D., & Barlett, S. (1977). Judgements of grammaticality by normal and language-disordered children. Journal of Speech and Hearing Disorders, 42, 199-209.
- Mims, H.A. (1982). Dialect switching on stigmatized Black English grammatical forms: Implications. Paper presented at the American Speech-Language-Hearing Association National Convention, Toronto, Canada.
- Mims, H.A., & Camden, C.T. (1984). External discrimination ability as related to Black English grammatical variance. Unpublished manuscript, Cleveland State University, Department of Speech and Hearing, Cleveland.

- Moran, M.R., & Byrne, M.C. (1977). Mastery of verb tense markers by normal and learning-disabled children. Journal of Speech and Hearing Research, 20, 529-542.
- Newcomer, P.L., & Hammill, D.D. (1977). The test of language development. Austin, Texas: Empiric Press.
- Noel, M.M. (1980). Referential communication abilities of learning disabled children. Learning Disabilities Quarterly, 3(4), 70-75.
- Salvia, J., & Ysseldyke, J. (1981). Assessment in special and remedial education. Boston: Houghton Mifflin.
- Semel, E.M., & Wiig, E.H. (1975). Comprehension of syntactic structures and critical verbal elements by children with learning disabilities. Journal of Learning Disabilities, 8(1), 53-58.
- Simms, R.B., & Crump, W.D. (1983). Syntactic development in the oral language of learning disabled and normal students at the intermediate and secondary level. Learning Disabilities Quarterly, 6, 155-165.
- Vaughn-Cooke, F.B. (1980). Evaluating the language of black English speakers: Implications of the Ann Arbor decision. In M.F. Whiteman (Ed.), Reactions to Ann Arbor: Vernacular Black English and education (pp. 24-54). Arlington, Virginia: Center for Applied Linguistics.

Vogel, S.A. (1983). A qualitative analysis of morphological

bility in learning disabled and achieving children.

Journal of Learning Disabilities, 16(7), 416-420.

Weiner, F.D., Lewnay, L., & Erway, E. (1983). Measuring

language competence of Black American English. Journal of

Speech and Hearing Disorders, 48, 75-84.

Wiig, E.H., & Semel, E.M. (1976). Language disabilities in

children and adolescents. Columbus, Ohio: Charles E.

Merrill

Table 1

Frequency of Participants Stratified by School Systems, Grade Level and Sex

School	Group	
	LD	NonLD
Low SES	14	14
Middle SES	12	12
Total	26	26

Grade		
3	9	10
4	9	8
5	8	8

Sex		
Male	18	20
Female	8	6

Table 2

Means, Standard Deviations and Ranges of Chronological Age in Months and I.Q. for L.D. and NonL.D. Groups

Group	<u>M</u>	SD	Range	<u>t</u>
			IQ	
LD	88.46	7.95	76-110	.36
NLD	89.23	7.50	75-108	
			CA ^a	
LD	130.73	12.41	104-152	
NLD	125.31	12.80	105-151	

Note. The n of each group is 25 with a total n of 52.

^a Chronological age (CA) in months.

Table 3

Means and Standard Deviations for Groups, NLS and LD, and SES, Higher and Lower on the

Five Subtests of the TOLD-I and the TOLD I Total Score

Group by SES	N	TOT		SC		CH		WO		GN		GC	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Group													
NLD	26	41.89***	8.09	8.58*	2.56	8.00*	1.72	8.27*	3.01	9.04*	2.53	8.00	2.12
LD	26	32.15	7.38	5.65	2.15	6.62	1.86	5.85	2.50	6.89	2.55	7.15	2.15
SES													
Higher	23	38.36	9.68	7.11	2.86	7.29	2.11	7.50	3.13	8.43	2.81	8.04	2.67
Lower	24	35.46	8.32	7.13	2.72	7.33	1.69	6.54	2.81	7.42	2.69	7.04	1.96
NLD													
Higher SES	14	44.00	8.21	8.50	2.53	7.93	1.94	8.93	3.36	9.93	2.43	8.71	1.98
Lower SES	12	39.42	7.54	8.67	2.71	8.08	1.51	7.50	2.47	8.00	2.45	7.17	2.04
LD													
Higher SES	14	32.71	7.65	5.71	2.52	6.64	2.13	6.07	2.17	6.93	2.37	7.36	2.41
Lower SES	12	31.50	7.33	5.58	1.73	6.58	1.56	5.58	2.91	6.83	2.86	6.92	1.86

Note. Subtest abbreviations: TOT = Sum of Subtest Scores; SC = Sentence Combining; CH = Characteristics; WO = Word Order; GN = Generals; GC = Grammatical Comprehension.

* $p < .01$. ** $p < .001$. *** $p < .0001$.

Table 4

One Sample t Values Testing the Comparability to
Population Norms on TOLD-I Subtests

Group by SES	SC	CH	WO	GN	GC
NLD					
Higher SES	-2.21*	-4.00**	-1.19	-0.11	-0.11
Lower SES	-1.71	-4.41**	-3.51**	-2.83*	-2.83*
LD					
Higher SES	-6.35****	-5.89****	-6.79****	-4.85**	-4.85**
Lower SES	-8.84****	-7.57****	-5.26****	-3.84**	-3.84**

Note: Mean and standard deviations for sample subgroups are presented in Table 3. Subtest means for the norming population were 10, with a standard deviation of 3.

*p .05, **p .01, ***p .001, ****p .0001.

Table 5

One Sample t Tests Comparing Sample and Norm Means on the Told-IComposites for LD and NLD subjects

Composite	Sample <u>M</u>	<u>SD</u>	<u>SE_m</u>	<u>t</u>
<u>LD</u>				
Syntax	18.65	5.07	.99	-11.42****
Semantics	13.50	3.61	.71	-9.17****
Expressive	18.38	5.31	1.04	-11.16****
Receptive	13.76	3.31	.65	- 9.59****

<u>NLD</u>				
Syntax	24.85	5.79	1.14	- 4.54****
Semantics	17.04	3.28	.64	- 4.60****
Expressive	25.88	6.35	1.24	- 3.31**
Receptive	13.76	3.31	.55	- 7.21****

Note. Means and Standard deviations for the norming population composites were: Syntax, M = 30, SD = 7; Semantics, M = 20, SD = 5; Expressive Language, M = 30, SD = 7; Receptive Language, M = 20, SD = 5.

p .01. **p .0001.

Table 6

One Sample t Tests Comparing Sample and Norm Means for Measures
of Syntax, Semantics, Expressive Language and Receptive Language

Group	Composite			
	Sample M	SD	SEm	t
Syntax				
NLD				
Higher SES	26.12	6.30	1.68	-2.29*
Lower SES	23.33	4.98	1.44	-4.64***
LD				
Higher SES	19.14	5.41	1.44	-7.52****
Lower SES	18.08	4.81	1.39	-8.58****
Semantics				
NLD				
Higher SES	17.86	2.96	0.79	-2.71*
Lower SES	16.08	3.50	1.01	-3.87**
LD				
Higher SES	13.57	3.50	0.94	-6.87****
Lower SES	13.42	3.90	1.13	-5.85****
Expressive Language				
NLD				
Higher SES	27.37	6.08	1.63	-1.63
Lower SES	24.17	6.46	1.87	-3.13**
LD				
Higher SES	18.71	5.27	1.41	-8.01****
Lower SES	18.00	5.56	1.61	-7.48****
Receptive Language				
NLD				
Higher SES	16.46	3.27	0.88	-3.84**
Lower SES	15.25	2.09	0.61	-7.86****
LD				
Higher SES	14.00	3.70	0.99	-6.07****
Lower SES	13.50	2.94	0.85	-7.66****

Note. Means and Standard deviations for the norming population composites were: Syntax, M = 30, SD = 7; Semantics, M = 20, SD = 5; Expressive Language, M = 30, SD = 7; Receptive Language, M = 20, SD = 5.

*p .05. **p .01. ***p .001. ****p .0001.

Table 7

Correlations for Age and Subtest Scores
for Norming Population and Black Sample

Subtest	Correlation Coefficients		
	Black Children		Norming Pop.
	NLD	LD	
Sentence Combining	.39*	.30	.128***
Characteristics	.18	-.03	.25***
Word Order	-.17	.50**	.23***
Generals	.31	.38	.41***
Grammatical Comprehension	.40*	.26	.17***

*p .05. **p .01. ***p .001

Table 8

Means and Standard Deviation for Groups, NLD and LD, and SES, Middle and Lower on the Two Piat Subtests, and the Average Piat Score.

Group	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
NLD	99.69	11.76	99.81	11.20	99.75	11.11
LD	86.42	12.41	85.35****	12.40	85.88	11.61
SES	<u>X</u>	<u>SD</u>	<u>X</u>	<u>SD</u>	<u>X</u>	<u>SD</u>
Middle	96.46	13.54	96.36*	13.22	96.41*	12.75
Lower	89.08	13.09	88.17	13.38	88.63	12.83
Group by SES	<u>Word Recognition</u>		<u>Reading Comp.</u>		<u>Piat Average</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
NLD						
Middle SES	101.50	13.18	102.07	11.35	101.79	11.88
Lower SES	97.58	10.00	97.17	10.90	97.36	10.11
LD						
Middle SES	91.43	12.35	90.64	12.79	91.04	11.58
Lower SES	80.58	10.03	79.17	8.87	79.88	8.65

*p .05. **p .01. ***p .001. ****p .0001.

Middle SES NLD -----
 Middle SES LD =====
 Lower SES NLD oooooooooo
 Lower SES LD

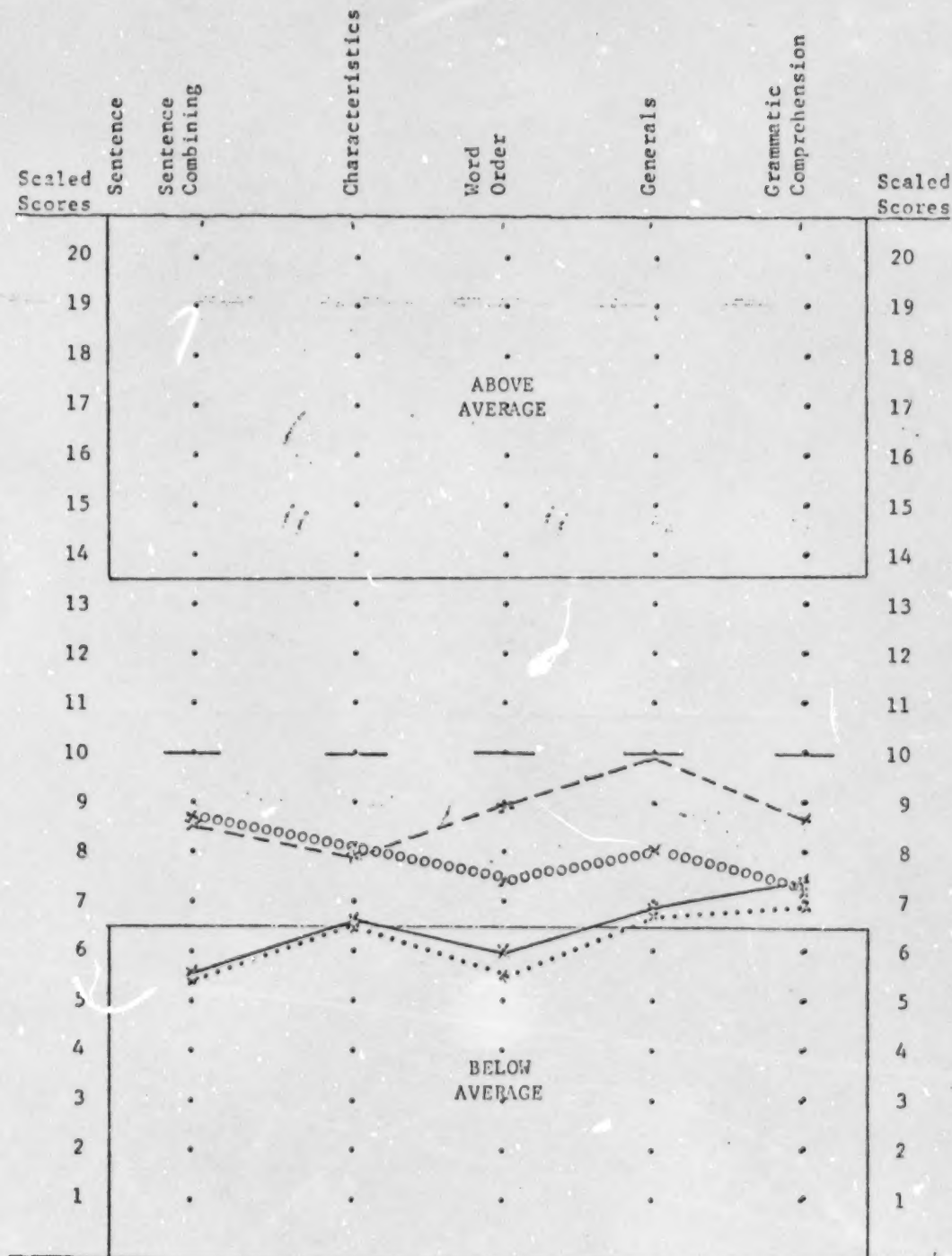


Figure 1. Mean scores on the Told-I for SES (middle and lower) by group (LD and NLD)

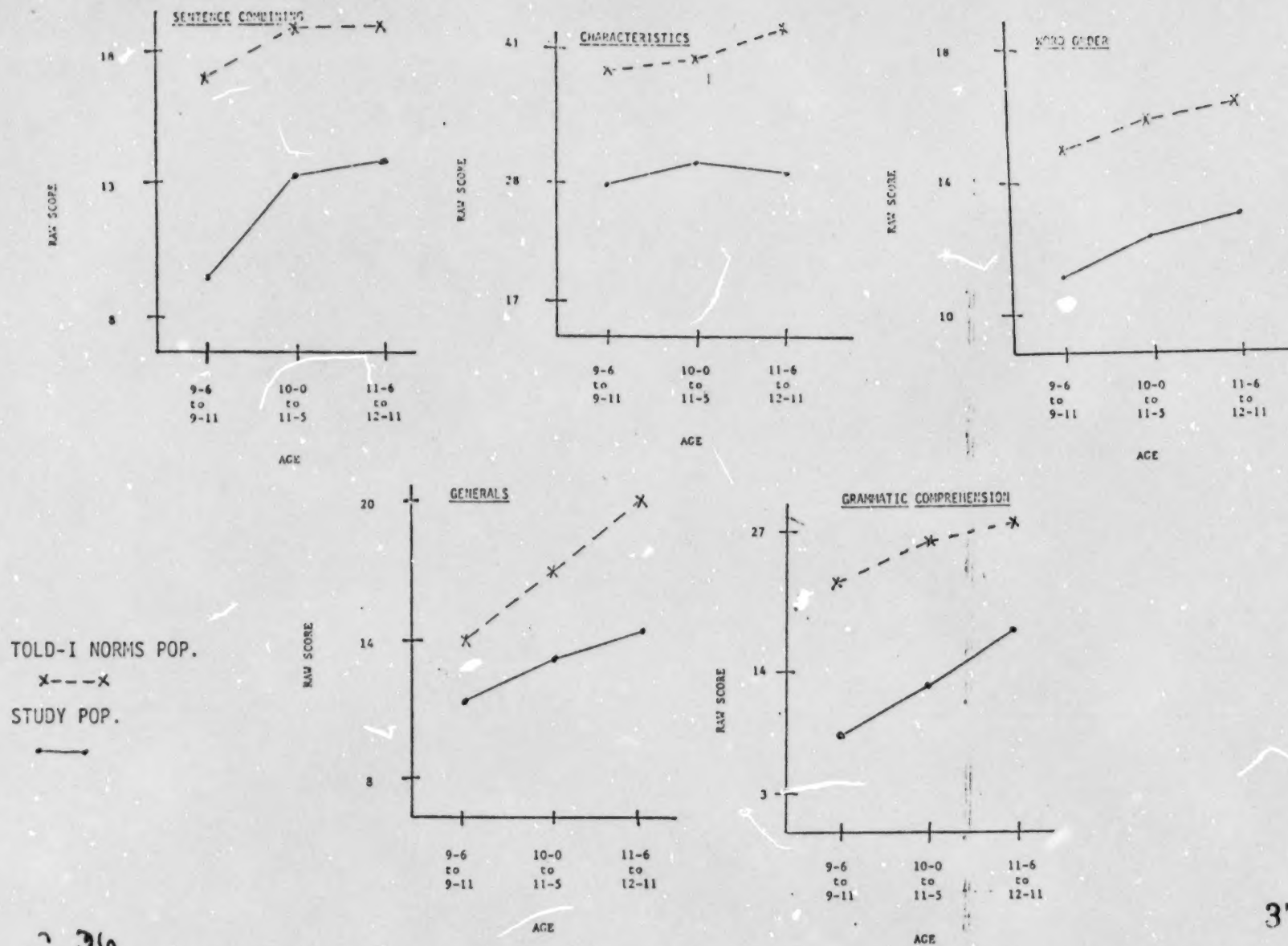


Figure 2. Age differentiation on TOLD-I compared to norming population for each subtest